Local conductivities ...

in the major part of the USSR, which can be used for calculating radio-station fields, earthing, aerial design, etc. There are 5 figures and 2 tables.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation, AS USSR)

SUBMITTED: December 13, 1962

Card 2/2

KASHPROVSKIY, V.Ye.

Correlation of the electroconductivity of soils and their physicochemical properties. Geomag. i aer. 3 no.5:961-967 S-O '63. (MIRA 16:11)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

L 1340-66 EWT(d)/EWT(1) RB/GW

ACCESSION NR: AP5021008 UR/0203/65/005/004/0768/0770

550.388.2

AUTHOR: Kashprovskiy, V. Ye.

TITLE: Characteristics of surface wave propagation in the permafrost zone

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 4, 1965, 768-770

TOPIC TAGS: radio wave propagation, radio wave scattering, arctic communication

ABSTRACT: The author analyzed the existing data on the Earth's electrical conductivity and gathered some original data on radio wave propagation over perennially frozen ground in the vicinity of Yakutsk. A theoretical analysis of these data together with the fact that the waves penetrate significantly into the inhomogeneous ground shows that the effect of local topography is compensated to a considerable degree and that the scattering is not very large even in the case of the complex topography of the permafrost zone. A similar situation should be expected to exist in the near-polar regions of the USA and Canada, and possibly in the Antarctic.

Card 1/2

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4092

Card 2/2

SOV/115-59-5-17/27

9(3), 28(2)
AUTHOR: Kasperovich, A.N.

TITLE: Photoelectric Amplifiers F 17

PERIODICAL: Izmeritel'naya Tekhnika, 1959, Nr 5, pp 35-39 (USSR)

ABSTRACT: The author states, that there are still difficulties in producing a device with galvanometer, optic system and photosensitive elements (now usually called "Photoelectric amplifier"), which is needed for various photo-compensating systems. For that reason, the universal photo-electric amplifier F17 was constructed by the factory "Vibrator". Since 1957 it has been on the market. F17 consists of three principal parts: galvanometer, "illuminator" and photo-resistance. The galvanometer is isolated against the surrounding temperature. The photo-resistance, made of cadmium sulfide, is constructed especially for F17 by B.T. Kolomiyets and A.O. Olesk (Ref.1). It has a small temperature factor. At present, three types of F17 are being produced: F17/1, sensitive for voltage, F17/2, sensitive for current, F17/3, used for stabilization. Some possibilities of switching the photoelectric amplifier are given. Given also, are the calculation formula and a numeric example for calcu-

Card 1/2

Photoelectric Amplifiers F 17

lations. F17 is already used for several measuring instruments. One also uses it for the production of a highly sensitive photo-compensating fluxmeter. There are 2 diagrams, 4 block diagrams, 1 layout and 3 Soviet references.

PHASE I BOOK EXPLOITATION 1032

Yershov, Leonid Davidovich, Candidate of Technical Sciences, and Kashperovskaya, Ol'ga Pavlovna, Engineer

Vyazhushchiye materialy i izdeliya na osnove vibropomola (Binding Materials and Products Made With Vibration-crushed Base) Kiyev, Gosstroyizdat USSR, 1957. 79 p. (Series: V pomoshch' inzheneru-stroitelyu i arkhitektoru) 6,500 copies printed.

Ed.: Andrushchenko, V.; Tech.: Ioakimis, A.

PURPOSE: This book is intended for construction engineers and architects.

COVERAGE: The author describes the construction and working principle of the M-200 vibro-crusher giving mechanical diagrams of the unit. The technology of the local production of binding materials and construction products from vibration-crushed materials and the wet and dry crushing of cement in vibro-crushers is also covered. The book also contains information on the quality control of raw materials and the finished product. No personalities are mentioned. There are 4 references, all Soviet.

Card 1/2

Card 2/2

BK/gmp
1/23/59

15(6) SOV/101-59-4-4/10

AUTHORS: Yershov, L.D. and Kashperovskaya, O.P.

TITLE: Melted Cements

PERIODICAL: Tsement, 1959, Nr 4, pp 14-16 (USSR)

ABSTRACT: The authors review the possibility of obtaining cement from blast furnace slags, melted at high temperature. They state that obviously the mineral-petrographic properties of the solidified cement slag and of the cement clinker will differ. The experimental melting materials were either usual cement components or blast furnace slag with some additions. For fusion of various cement samples an oxyacetylene flame has been used. Table 1 shows the composition of the samples of portland cement and table 2 shows the strength of that cement after various periods of setting. Table 3 shows the composition of aluminous mixture samples to be melted, and table 4 gives the strength of the obtained cement after various periods of setting.

Card 1/3

Melted Cements

For preparation of a cement mixture as shown in table 5, blast furnace slag was used, originating from the Zaporozhstal' (Zaporozh'ye Steel) plant. Table 6 gives the strength of cement obtained from the above melted mixture after various periods of setting. Finally, table 7 shows the strength data obtained from cement produced of clinker, originating from the Nikolayevskiy tsementnyy zavod (the Nikolayev Cement Plant), and melted at 1780 to 1810° C after various periods of setting. For comparison, the above table contains strength data of cement obtained from the same "500" clinker but produced by conventional means. Photograph 1 (Figure 1) and photograph 2 (Figure 2), show results of petrographic investigations of both kinds of clinker, i.e.) of melted clinker and clinker produced by the usual means, respectively. The authors conclude that portland cement obtained by the melting method differ by

Card 2/3

Melted Cements

their mineral-petrographic structure from cements obtained by the usual calcination methods. There are 2 photographs and 7 tables.

Card 3/3

PELYMSKIY, G.A.; KASHPIROV, S.N.

Association of uranium mineralization in hydrothermal veins with pyrite-containing rocks. Geol.rud.mestorozh. no.4:77-83 Jl-Ag '62. (MIRA 15:8)

(Pyrites) (Uranium ores)

FIRSOV, A.P.; KASHPOROV, B.G.; KISSIN, Yu.V.; CHIRKOV, N.M.

Stereospecific action of the complex catalyst α-$TiCl_3$ - $Me(C_2H_5)n$ in the polymerization of α-olefins depending on the nature of the metal of the organometallic compound. Vysokom.soed. 4 no.7:1124 Jl '62. (MIRA 15:7)

(Olefins)
(Polymerization)
(Organometallic compounds)

KASHPROVSKIY, S.Ye., inzhener; KAGANOVSKAYA, Ye.A., inzhener.

Operating remote controlled substations and distributing centers.
Elek.sta. 25 no.11:45-47 N '54. (MLRA 7:11)
(Remote control) (Electric substations)

KASHPROVSKIY, S.Ye.

Method for determining the mechanical characteristics of an asynchronous motor with short-circuited rotor. Energ. i elektrotekh. prom. no.1:32-34 '62. (MIRA 15:6)
(Electric motors, Induction)

2-58-3-16/17

AUTHOR: Kashpur, A., Head Bookkeeper of the Kiyev Sovnarkhoz

TITLE: At the Sovnarkhoz of the Kiyev Economic Rayon (V sovnarkhoze Kiyevskogo ekonomicheskogo rayona)

PERIODICAL: Vestnik Statistiki, 1958, Nr 3, p 89 (USSR)

ABSTRACT: The article is a report of a conference held December 1957 in Kiyev by the chief bookkeepers of industry-branch sovnarkhoz administrations, chief bookkeepers of undertakings and heads of mechanical accounting stations and offices. The general level of mechanization was held to be unsatisfactory, and the conference undertook to increase the extent of accounting mechanization in undertakings under the jurisdiction of the Kiyev sovnarkhoz. In addition, there were complaints of a grave lack of trained technicians due to inadequate technical training facilities and much criticism of Soyuzmashuchët for the poor quality of a number of calculating machines.

Card 1/1

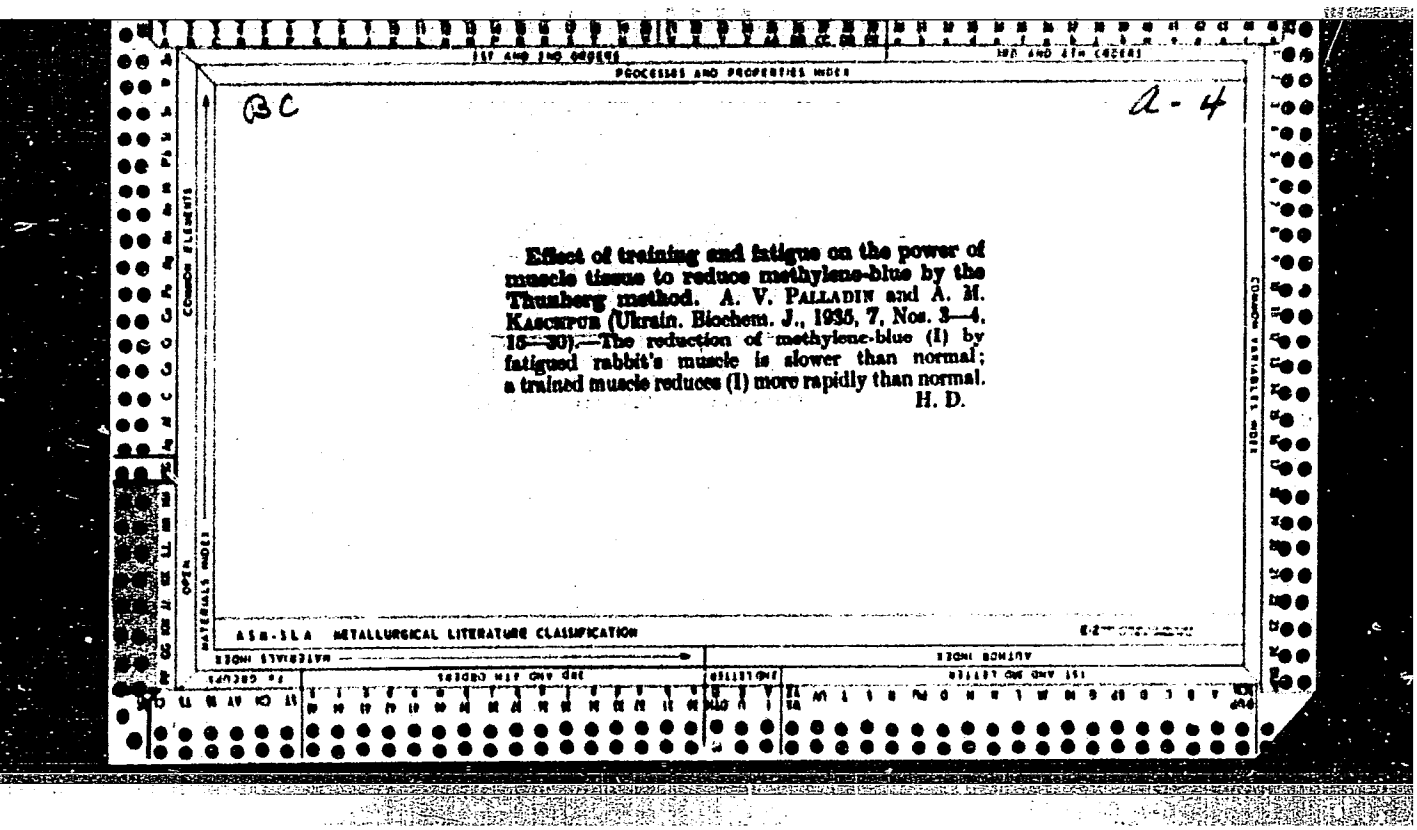
KASHPUR, A.

LEV, Ya.; KASHPUR, A.; YAKOVLEV, Yu.

Organize accounting for surpluses and deficiencies correctly.
Bukhg. uchet 15 no.5:25-27 My '58. (MIRA 11:5)
(Accounting) (Larceny)

IVANCHENKO, S.; KASHPUR, A.; SHESTAKOV, V.

Mechanizing the administrative work. Sots. trud 6 no.8: 66-68 Ag '61. (MIRA 14:8)
(Ukraine--Machine accounting)



BC

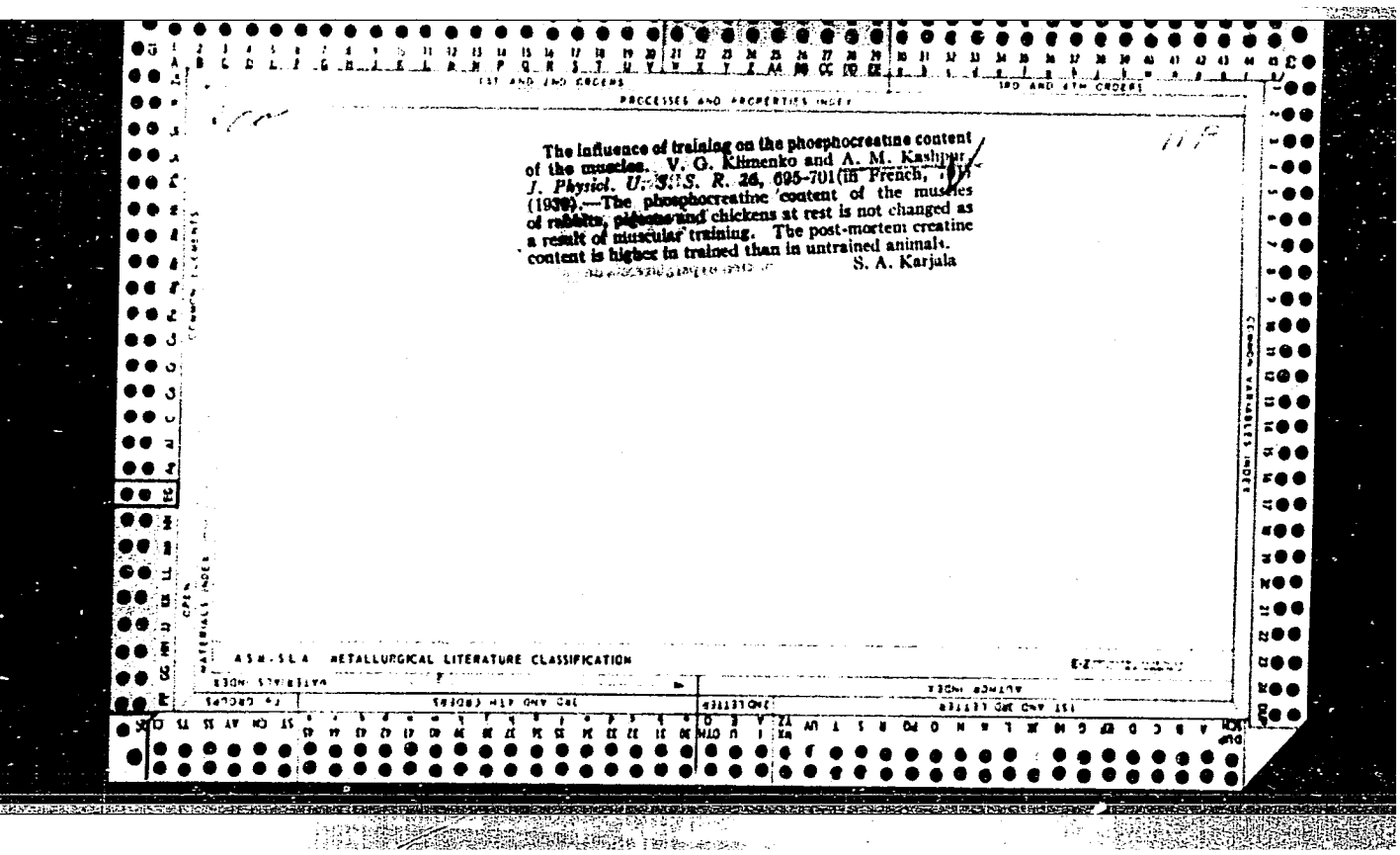
a-4

Effect of training and fatigue on the power of muscle tissue to reduce methylene-blue by the Thunberg method. A. V. Palladin and A. M. Kascurun (Ukrain. Biochem. J., 1935, 7, Nos. 3—4, 15—30).—The reduction of methylene-blue (I) by fatigued rabbit's muscle is slower than normal; a trained muscle reduces (I) more rapidly than normal.

H. D.

KASHPUR, A.M.

On the ratio of magnesium to ade nosine- triphoshoric acid content in muscles. A.M. KASHPUR, P.A. VERBOLICH AND V.I. ROZENGART. (CHAIR OF BIOCHEMISTRY MEDICAL INSTITUTE, DNIEPROPETROVSK) vol.3, no.2, p. 270, 1938.



PROCESSES AND PROPERTIES INDEX

The influence of training on the phosphocreatine content of the muscles. V. G. Klimenko and A. M. Kashpur. *J. Physiol. U.S.S.R.* 26, 695-701 (in French, 701 (1939).—The phosphocreatine content of the muscles of rabbits, pigeons and chickens at rest is not changed as a result of muscular training. The post-mortem creatine content is higher in trained than in untrained animals.
S. A. Karjala

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

11F

Laws of chemical interchange in muscles under systematic exercise. A. M. Kashpur. *Uspekhi Sovremennoi Biol.* 26, 863-74(1948).—Crit. review and tabulated observations on changes in glycogen, creatine, carnosine, phosphatides, and numerous other muscle components in test animals under general exercises and after specific training of one set of muscles. 61 references. J. F. S.

KASHPUR, A. M.

"Certain Regularities Governing Changes in the Muscular Chemism as Affected by Training," Uspekhi Soverm. Biol., 26, No. 3, 1948.

Chair of Biochemistry, Dnepropetrov Medical Institute

KASHPUR, A. M.

USSR/Chemistry - Colloids Jan/Feb 49
Chemistry - Albumins

"Structure of Globular Albumin (Comment on Article by S. Ye. Bresler and D. L. Talmud)," A. M. Kashpur, Chair of Biol, Dnepropetrov Med Inst, 3 pp

"Kolloid Zhur" Vol XI, No 1

PA 45/49T15

Refers to subject article published in "Doklady Akademii Nauk SSSR" Vol XLIII, 1944. Kashpur claims that: (1) It is physically impossible to determine size of albumin by using formula $R=\frac{3\phi}{g}$; (2) when albumin is not round it may assume any form; (3) albumin in nature does not have a round form; (4) biological characteristics are determined

45/49T15

USSR/Chemistry - Colloids (Contd) Jan/Feb 49

by actual and not static monodispersion of albumins vital to life. Submitted 5 Jun 48.

45/49T15

Muscle evolution in vertebrates. A. M. Kashpur (Med Inst., Dnepropetrov). *Zhur. Obshchei Biol.* 13, 80-94 (1952).—Red and white muscles of frogs, birds, rabbits, and dogs were compared as to glycogen, creatine, adenosine-triphosphoric acid, Fe, myoglobin, cytochrome c, reduction of methylene blue, and O absorption. In the higher vertebrates red (exercised) muscles show a variety of morphological changes connected with respiration and with the absorption and transport of O by the blood. J. F. S.

IVANCHENKO, Semen Trofimovich, kand.ekonom.nauk; KASHPUR, A.T., retsenzent; RIKHBERG, D.B., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[The over-all mechanization and automation of calculating work in machinery manufacturing enterprises] Kompleksnaia mekhanizatsiia i avtomatizatsiia vychislitel'nykh rabot na mashinostroitel'nykh predpriiatiiakh. Moskva, Mashgiz, 1961. 166 p. (MIRA 14:12)
(Machinery industry--Accounting) (Machine accounting)

TERESHCHENKO, I.P.; MOSKVIN, O.I.; DARAGAN, M.V.[Darahan, M.V.]; ANISIMOV, V.P.; YARMOLINSKIY, M.R.[IArmolyns'kyi, M.R.]; BULGAKOV, P.S.[Bulhakov, P.S.]; KUTS, V.K.; KASHPUR, A.V.; VASILENKO, G.K.[Vasylenko, H.K.]; KUKOLEV, V.D.[Kukoliev, V.D.]; SIGOV, S.G.[Sihov, S.H.,deceased]; NAGIRNYAK, P.A. [Nahirniak, P.A.]; VETCHINOV, I.A.[Vietchynov, I.A.]; ZADOROZHNYY, V.K.; DROSOVSKAYA, L.I.[Drosovs'ka, L.I.]; SHKITINA, M.I.; PROSHCHAKOV, O.M.; MOKIYENKO, B.F. [Mokiienko, B.F.]; GOLOVACH, A.V.[Holovach, A.V.]; IVANITSKIY, I.V.[Ivanyts'kyi, I.V.]; KOZAK, V.Ye.; BORYAKIN, V.M., red.izd-va; NESTERENKO, O.O., glav. red.; DAKHNO, Yu.B., tekhn. red.

[National income of the Ukrainian S.S.R. during the period of the large-scale building of communism] Natsional'nyi dokhod Ukrains'koi RSR v period rozhornutoho budivnytstva kommunizmu. Red.kol.: O.O.Nesterenko ta inshi. Kyiv, Vyd-vo AN URSR, 1963. 333 p. (MIRA 16:12)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
(Ukraine--Income)

L 13964-66 EWA(j)/EWT(m)/EWA(b)-2 GS/JXT/RM

ACC NR: AT6003456 SOURCE CODE: UR/0000/65/000/000/0083/0093

AUTHOR: Maleyev, V. Ya.; Todorov, I. N.; Kashpur, V. A.

ORG: none

TITLE: An electrical analog for associated vibrations in nucleic acid and the problem of determining the nucleotide sequence

SOURCE: AN UkrSSR. Issledovaniya po bionike (Research in bionics). Kiev, Naukova dumka, 1965, 83-93

TOPIC TAGS: nucleic acid, electric analog, bionics, polymer, vibration spectrum

ABSTRACT: The authors consider the theoretical possibility of determining the nucleotide sequence in a nucleic acid from its vibrational spectrum. A mechanical model of a polynucleotide is proposed as a first approximation in which the polymer is linear with the least rigid bonds between the separate monomers (nucleotides). This model reflects several of the properties of the primary structure in nucleic acids. Associated vibrations are analyzed in a linear chain of n rigid nucleotides with masses $M, m_1, \ldots, m_{n-1}$ connected by uniform elastic threads of rigidity k.

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L 13964-66
ACC NR: AT6003456

Longitudinal oscillations are considered in which the displacement vectors of all masses are parallel to the axis of the molecule. The frequencies of oscillations in this system are assumed to be known and an electrical analog of the model is used as a basis for demonstrating how these data may be used for determining the order of the monomer sequence. The proposed method is illustrated by application to an electrical polymer model consisting of a nonuniform LC ladder network. The results show complete agreement in every case with the known sequence of monomers in nucleic acid chains. Orig. art. has: 2 figures, 3 tables, 22 formulas.

SUB CODE: 06,09/ SUBM DATE: 25Aug65/ ORIG REF: 005/ OTH REF: 005

Card 2/2

1. KASHPUR, YA. N.

2. SSSR (600)

4. Geology-Donets Basin

7. Geothermal conditions in coal deposits of the southwestern part of the Donets Basin.
Dokl. AN SSSR 86 No. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KASHPUR, Ya.N.

Temperature of rock strata at great depths in the Stalino-Makeyev district of the Donets Basin. Ugol' 29 no.7:11-14 Jl '54.(MLRA 7:7)

1. Trest Artemugleogeologiya. (Stalino region--Coal mines and mining) (Makeyev region--Coal mines and mining)

Kashpur, Ya. N.

USSR/ Physics -- Temperature probes

Card 1/1 Pub. 86 - 13/39

Authors : Kashpur, Ya. N.

Title : Measuring the temperature in the deepest mine seams in the Don basin

Periodical : Priroda 44/3, 88 - 89, Mar 1955

Abstract : An account is given of temperature soundings in mine seams in the Don basin to depths of 500 to 800 meters, which showed the temperature curve to be linear. Later soundings went down to 1060 and 1450 meters and eventually 1503 meters was reached. These later soundings produced undulated temperature curves. Graphs.

Institution : Academy of Sciences, USSR, Acoustics Institute

Submitted : .....

KASHPUR, Ya.M.

Characteristics of geothermal conditions in the Donets Basin. Geol. zhur. 17 no.4:33-39 '57. (MIRA 11:4)
(Donets Basin--Earth temperature)

Kashpur, Ya. N.

20-3-10/46

AUTHOR: Kashpur, Ya. N.

TITLE: On the Problem of Geothermal Anomalies of the Donets Basin (K voprosu o geotermicheskikh anomaliyakh Donbassa)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 3, pp. 385 - 388 (USSR)

ABSTRACT: The geomagnetic behavior of the layers of coal deposits at the boundary of the open part of the Donets basin modifies itself corresponding to the tectonic structure. By numerous geothermic measurements in the pits of various areas here recorded it has been stated that the geothermic conditions within certain parts of the anticlinal structures are higher than within the central parts of the synclinals. During recent years increased values of the geothermic gradient and of the height indications of geoisothermal surfaces in the individual regions of the western sector of the large Donets basin have been observed. The author here regards one of these geothermical observed anomalies in the area of Petropavslovsk-Mezhevsk. At first something is referred on the geologic structure of this area. By geothermic measurements within the pits of the central parts of the area, there has been observed a more intensive growth of temperature than within the pits lying at the

Card 1/3

20-3-10/46

On the Problem of Geothermal Anomalies of the Donets Basin

periphery of the domain. The extension of these anomalies easily may be defined. Also the numerical values of the geothermic gradient obtained by the measurements are given. The curvature of the geoisothermal surfaces in the central part of the area is illustrated by a diagram. In the following the author investigates the possible causes of the thermic anomalies. By no means here the relief of the surface of the earth is to be considered as cause. The geothermic gradient depends much more on the contents of coal of the layers. The numerical values of the geothermic gradient found out for various species of rocks are given. The faster rise of temperature by the depth far off may be defined by the presence of coal layers. The various densities of the heat current in the interior of the deeper deposits have an additional influence upon the temperature distribution in the investigated cross section of the deposits . Also the degree of metamorphosis of the rocks has an influence. The geostructural factor is by no means the single cause of the thermal phenomenon in the interior of the Donets basin. There are 1 figure, 1 table and 7 Slavic references.

Card 2/3

20-3-10/46

On the Problem of Geothermal Anomalies of the Donets Basin

ASSOCIATION: Trust "Artemuglegeologiya", Donets-Basin (Trest "Artemuglegeologiya" Donbass)

PRESENTED: April 29, 1957, by N. M. Strakhov, Academician

SUBMITTED: March 30, 1957

AVAILABLE: Library of Congress

Card 3/3

3(5) PHASE I BOOK EXPLOITATION SOV/3055

Kashpur, Yakov Nikolayevich and Anatoliy Fedorovich Zakhar'in

Geotermicheskiye usloviya Yugo-Zapadnoy chasti Donbassa (Geothermal Conditions of the Southwestern Part of the Donets Basin) Moscow, Ugletekhizdat, 1958. 114 p. 1,500 copies printed.

Ed. of Publishing House: G. M. Il'inskaya.

PURPOSE: This book is intended for engineering and technical personnel engaged in the survey, exploitation, and development of coal deposits.

COVERAGE: This book examines the techniques of making geothermal measurements in the Donbass and the results of such investigations. Chief attention is given to the study of temperature change as a function of depth, the study of the geothermal regime in deep horizons, and the factors which control it. A diagram is included showing the characteristics of the geothermal regime of a coal field. The geothermal regime of the Donbass and adjacent regions is compared with certain European deposits. Professor Dakhnov and Doctor of Technical Sciences A. N. Shcherban'.aided in processing field observations. The author thanks Academician A. A. Skochinskiy and Professor G. D. Lidin. Chapters I, III - VI were written by Ya. N. Kashpur and Chapter II by A. F. Zakhar'in. There are 73 Soviet references.

Card 1/3

TABLE OF CONTENTS

KASHPUR, YA.N.

24(8) PHASE I BOOK EXPLOITATION SOV/2768

Vsesoyuznoye soveshchaniye po geotermicheskim issledovaniyam. 1st, 1956.

Problemy geotermii i prakticheskogo ispol'zovaniya tepla zemli; trudy, t.1. (Geothermal Problems and the Practical Utilization of Terrestrial Heat; Transactions of the 1st All-Union Conference on Geothermal Investigations, Vol. 1) Moscow, Izd-vo AN SSSR, 1959. 254 p. Errata slip inserted. 1,300 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk.

Ed. of Publishing House: L. V. Gessen; Tech. Ed.: I. N. Guseva; Editorial Board: V. I. Vlodavets (Chairman), I. D. Dergunov (Deceased), V. V. Ivanov, F. A. Makarenko, and N. I. Khitarov.

PURPOSE: This book is intended for geologists, hydrogeologists, and geophysicists in general and petroleum and coal geologists in particular.

COVERAGE: This volume, one of two published on the subject, is a collection of 22 articles based on reports presented at the First All-Union Conference on Geothermal Studies held in March, 1956. The Conference was sponsored and organized by the Laboratory of Vulcanology, the Laboratory of Hydrogeological Problems im. F. P. Savarinskiy, the Institute of Geochemistry and Analytical Chemistry, the Geophysical Institute, and was attended by representatives of more than 60 research organizations. The material presented in this volume may be divided into three general categories: (1) general geothermal problems of the Earth (2) current status and methods of geothermal research (3) regional geothermal problems. References accompany each article.

1/

KASHPUR, Ya.N. [Kashpur, IA.M.]

Measuring temperature in the Ocheretino borehole in the Donets Basin. Dop.AN URSR no.8:1078-1080 '60. (MIRA 13:9)

1. Trest "Artemgeologiya," Donbas. Predstavleno akademikom AN USSR V.G.Bondarchukom.

(Earth temperature)

KASHTALYAN, Yu.A.

Relay-regulator of stable gas pressure. Prib. i tekh. eksp. no.3:150 My-Je '60. (MIRA 14:10)

1. Institut stroitel'noy mekhaniki AN USSR.
(Electric controllers)

PISARENKO, G.S.; BORISENKO, V.A.; KASHTALYAN, Yu.A.

Effect of temperature on the hardness and the modulus of longitudinal elasticity of tungsten and molybdenum (20 - 2,700). Porosh.met. 2 no.5:79-83 S-O '62. (MIRA 15:11)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.
(Tungsten--Testing) (Molybdenum--Testing)

S/226/62/000/001/009/014
1003/1201

18.8200

Author Kashtalyan,, Yu. A.

Title. DEVICE FOR DETERMINING THE MODULUS OF ELASTICITY DURING TENSION AND SHEAR UNDER HIGH TEMPERATURE CONDITIONS.

Periodical: *Poroshkovaya metallurgiya*, no. 1(7), 1962, 61-64

Text: A device permitting the determination of Young's modulus and the shear modulus from measurement of the natural frequencies of bending and torsional vibrations of rod samples is described. Piezoelectric pick-ups are used both as excitor and as receiver. The samples are suspended on wire loops, eliminating the necessity of soldering or welding the sample. Heating is carried out in an inert medium. A tungsten or molybdenum spiral serves as heater. The temperature is measured by thermocouples and a pyrometer. The temperature dependence of the modulus of elasticity during tension and shear was obtained for tungsten, molybdenum and niobium up to a temperature of 1800°C. There are 2 figures and 1 table.

Association: Institut metallokeramiki i special'nykh splavov AN UkrSSR (Institute of Powder Metallurgy and Special Alloys AS UkrSSR)

Submitted. July 27, 1961

Card 1/1

ACCESSION NR: AT4002327 S/3036/63/000/000/0036/0038

AUTHOR: Kashtalyan, Yu. A. (Kiev)

TITLE: Temperature dependences of longitudinal elasticity modulus of sintered and cast tungsten at 20-2000 C

SOURCE: Voprosy* vy*sokotemperaturnoy prochnosti v mashinostroyenii. Vtoroye nauchno-tekhnicheskoye soveshchaniye, 1962. Trudy*. Kiev, 1963, 36-38

TOPIC TAGS: sintered tungsten, longitudinal elasticity modulus, cast tungsten, elasticity modulus, elasticity modulus temperature dependence, cast annealed tungsten, elasticity tungsten

ABSTRACT: Together with sintered tungsten, cast tungsten has recently found more and more application. Investigations of the mechanical properties of tungsten produced by different methods are therefore of interest. The author has studied the temperature dependence of the longitudinal elasticity modulus for both cast and sintered tungsten in a temperature range of 20-2000 C. The longitudinal elasticity modulus was determined dynamically by the eigen frequency of the first tone of the transverse vibrations of samples suspended and heated in the UP-5 apparatus shown in Fig. 1 of the Enclosure. The results are shown in Fig. 2 of the Enclosure. It has been found that cast tungsten ex-

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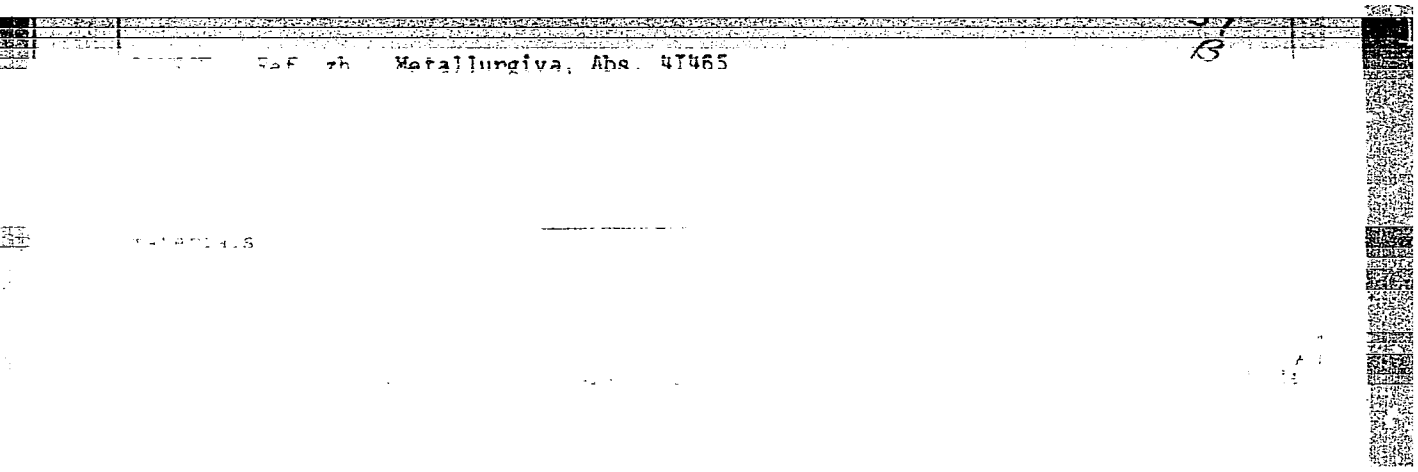
ACCESSION NR: AT4002327

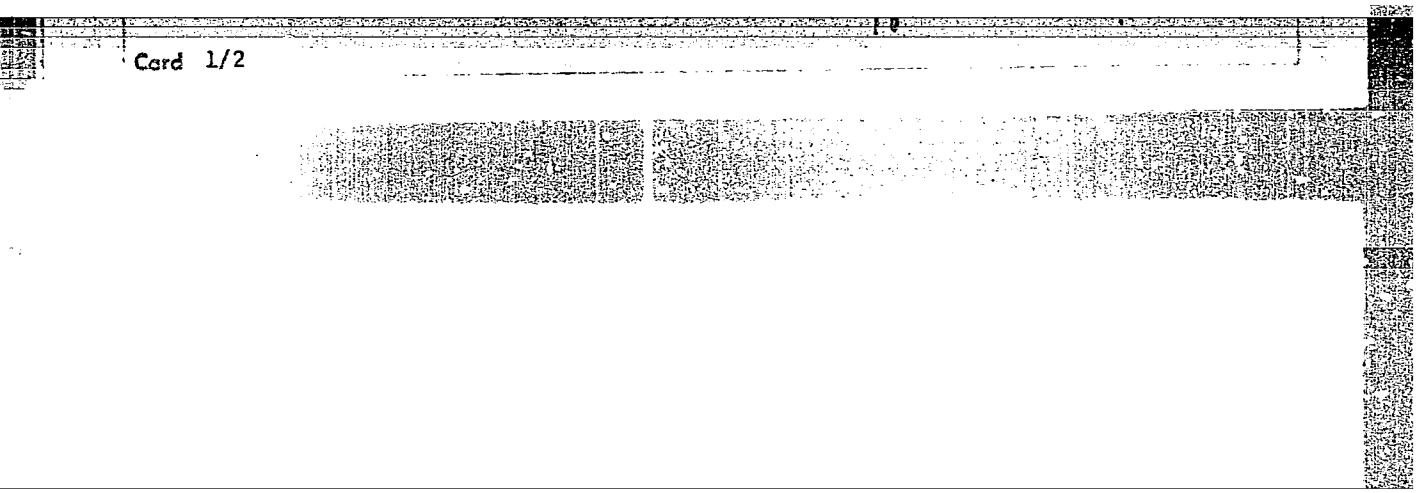
hibits a higher modulus of longitudinal elasticity than ceramic tungsten, and that the effect of annealing on the longitudinal elasticity modulus of cast tungsten is insignificant. Good agreement was observed between the present test results and the values of E obtained by others. Orig. art. has: 1 illustration and 1 graph.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 03Dec63	ENCL: 02
SUB CODE: ML, MA	NR REF SOV: 004	OTHER: 001

Card 2/4





APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721020010-8"

ACCESSION NR: AP4010064 S/0021/64/000/001/0141/0143

AUTHOR: Kashtalyan, Yu. A.

TITLE: Third Symposium on the Static and Dynamic Strengths of Materials and Construction Elements at High Temperatures, Kiev, 24-26 Sept 1963 (Review article)

SOURCE: AN UkrRSR, Dopovidi, no. 1, 1964, 141-143

TOPIC TAGS: material strength, refractory material, construction material, structural material, high-temperature strength, creep, thermal fatigue, heat-resistant alloys, gas turbines

ABSTRACT: The Third Symposium on the Static and Dynamic Strengths of Materials and Construction Elements at high temperatures was held in Kiev, from 24-26 Sept 1963. It was organized by the Institute of Metalloceramics and Special Alloys of the Ukrainian Academy of Sciences and the Kiev Order of Lenin Polytechnic Institute. More than 150 scientific workers and engineers from 50 scientific research institutes from all over the USSR attended. The 40 papers and notes that were presented were mainly devoted to short and long-term strength, creep, thermal fatigue of refractory materials and heat-resistant alloys at high temperatures, and likewise strengths and other pertinent values of gas turbines operating at

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ACCESSION NR: AP4010064

high temperatures.

The symposium adopted a resolution which called for a strengthening of studies along the major trends of high temperature strength. It also petitioned the State Committee on on coordination of scientific research of the Council of Ministers of the USSR to resolve the question of a serial appropriation of equipment which is necessary for high temperature research. It was also resolved that the proceedings of the symposium should be published. The original article contains an annotated listing of the reporting participants, their associations and the subjects of their papers.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 2/2

L 22998-66 EWT(d)/EWT(m)/EWP(w)/EPF(n)-2/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l)
ACC NR: AT6008643 JD/JG/GS(A) SOURCE CODE: UR/0000/65/000/000/0007/0013

AUTHORS: Pisarenko, G. S. (Academician AN UkrSSR) (Kiev); Kharchenko, V. K. (Kiev); Dubinin, V. P. (Kiev); Borisenko, V. A. (Kiev); Kashtalyan, Yu. A. (Kiev)

ORG: none

TITLE: Investigation of mechanical properties of high-melting materials at high temperatures in a vacuum and in an inert medium

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 7-13

TOPIC TAGS: tungsten, niobium, elastic modulus, elastic stress, elastic deformation, metallurgic testing machine, UVT-1 metallurgic testing machine, UVT-2 metallurgic testing machine

ABSTRACT: An experimental testing chamber for testing the mechanical properties of high-melting metals in a vacuum and in an inert medium at high temperatures has been developed (see Fig. 1). The temperature dependence of the modulus of elasticity, strength limit, and hardness limit of tungsten and molybdenum were determined. The experimental results are presented graphically (see Fig. 2). It was found that the strength and hardness limit obeyed the expressions of Frantsevich-Vrontskiy and

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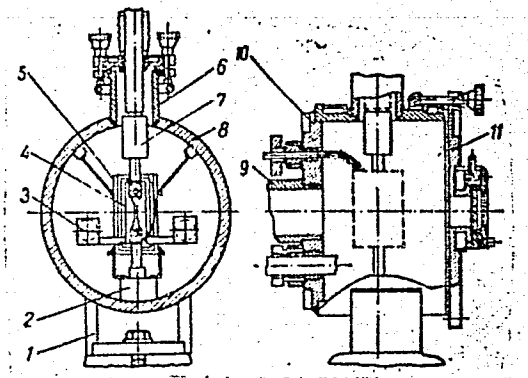

Fig. 1. Working chamber of the installation VTU-2V. 1 - foundation plate; 2 - clamps; 3 - current leads; 4 - specimen; 5 - heating installation; 6 - chamber top; 7 - hinged installation; 8 - body of chamber; 9 - exhaust nozzle; 10 - back cover; 11 - front cover.

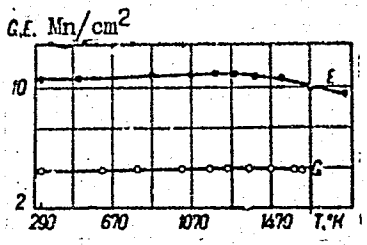

Fig. 2. Dependence of elasticity characteristics of niobium on the temperature. E and G - elastic modulus of the first and second kind respectively.

Ito-Shishokin, shown as $\sigma_s = m_n \sigma_0 e^{-\beta_n T}$, $H = k_n H_0 e^{-\alpha_n T}$,

where T is the temperature in degrees K, σ_0 and H_0 are the values of the strength and hardness limit at 0K, β_n and α_n are the temperature coefficients of the strength

L 22998-66

ACC NR: AT6008643

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and hardness limit, and m_n and k_n are constants. It is concluded that the maximum in the logarithmic decrement of oscillations in niobium at 57OK, first observed by M. G. Lozinskiy and A. Ye. Fedorovskiy, is related to the penetration of impurities into the niobium lattice. Orig. art. has: 8 graphs and 3 equations.

SUB CODE: 11/ SUBM DATE: 19Aug65/ ORIG REF: 010/ OTH REF: 001

Card 3/3 pla

L 21813-66 EWA(h)/EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/EWA(d)/EWP(l)/EWP(w)/EWP(v)/EWP(t)
ACC NR: AT6008646 IJP(c) JD/JC/JXT(cz)/SOURCE CODE: UR/0000/65/000/000/0028/0029
GS

AUTHOR: Kashtalyan, Yu. A. (Kiev)

ORG: none

TITLE: The elasticity charaoteristics of tungsten-molybdenum alloys at normal and high temperatures

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 28-29

TOPIC TAGS: Young modulus, shear modulus, high temperature alloy, tungsten alloy, molybdenum alloy, metallurgic testing machine/ UP-5 metallurgic testing machine

ABSTRACT: The Young and shear moduli of tungsten-molybdenum alloys with 39.2, 52.9, and 61.1% (by volume) molybdenum were determined at normal and increased temperatures. The specimens were prepared from metal smelted in a vacuum arc furnace, and the ingots were subjected to plastic deformation at high temperatures. The

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L 21813-66

ACC NR: AT5008646

elasticity characteristics were determined with a UP-5 machine.[14] The Young and shear moduli decrease gradually with an increase in temperature (see Fig. 1).

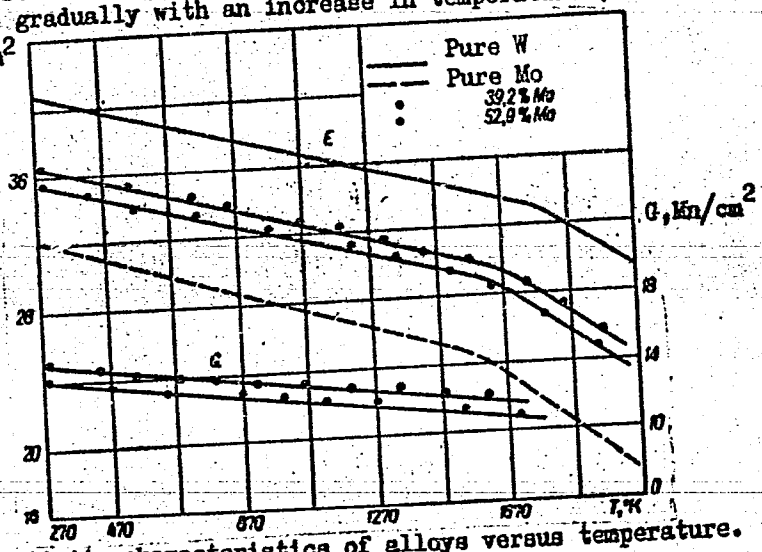

Fig. 1. Elasticity characteristics of alloys versus temperature.

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L 21813-66

ACC NR: AT6008646 O

Tungsten-molybdenum alloys are found promising for making high-temperature parts. Orig. art. has: 2 graphs.

SUB CODE: 11, 20/ SUBM DATE: 19Aug65/ ORIG REF: 001/ OTH REF: 001

Card 3/3 PB

L 21812-66 EWT(d)/EWT(m)/EWP(k)/EWP(h)/T/EWA(d)/EWP(w)/EWP(v)/...

ACC NR: AT6008647 JD/GS SOURCE CODE: UR/0000/65/000/000/0030/0034

AUTHORS: Dreshpak, V. A. (Kiev); Kashtalyan, Yu. A. (Kiev)

ORG: none

TITLE: Apparatus for determining the elasticity characteristics of refractory materials at temperatures of 290-3000K

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 30-34

TOPIC TAGS: metallurgic testing machine, refractory, shear modulus, Young modulus, Poisson coefficient, high temperature instrument / UP-6 metallurgic testing machine

ABSTRACT: The UP-6 apparatus for determining the Young and shear moduli of refractory materials in the temperature range of 290—3000K is described. The apparatus permits simultaneous determination of E and G of cylindrical specimens with a diameter of 7—8 mm and a length of 90—120 mm. The values of E and G from a single sample permit accurate calculation of the Poisson ratio of the material.

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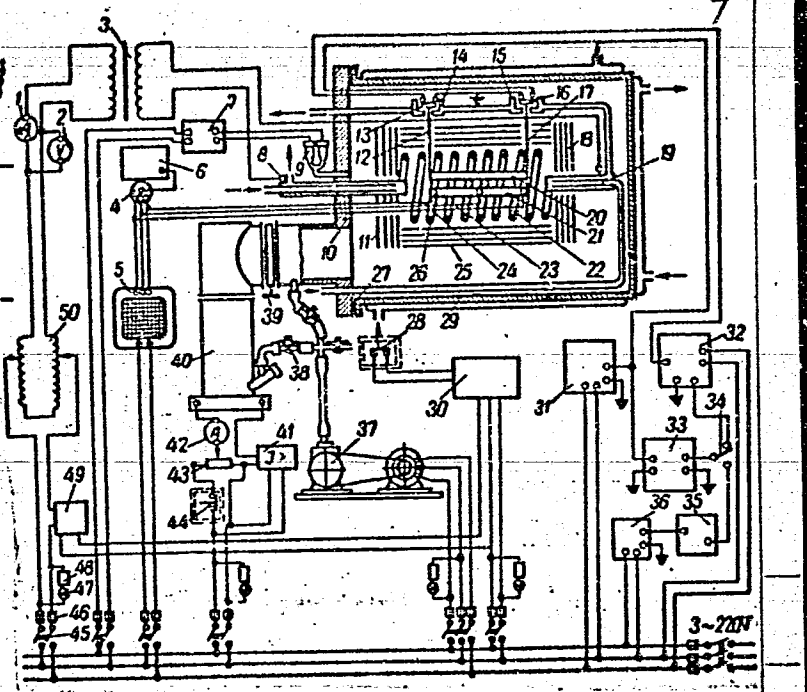
ACC NR: AT6008647

Fig. 1. UP-6: 1 - a-c ammeter; 2 - voltmeter; 3 - OSU-40/0.5 transformer; 4 - thermocouple switch; 5 - EPP-09 potentiometer; 6 - PP potentiometer; 7 - VIT-1 vacuum gauge; 8 - fixed current lead; 9 - LT-2 and LM-2 vacuumeter tubes; 10 - plate; 11, 18 - vertical shields; 12, 17 - wire hangers; 13 - oscillation receiver; 14, 15 - water-cooled containers; 16 - exciter; 19 - movable current lead; 20 - specimen; 21 - control specimen; 22, 23, 24 - thermocouples; 25 - horizontal shields; 26 - heater; 27 - gasket; 28, 44 - water-pressure relays; 29 - cover; 30 - MKU-48;



to card 3/3

L 21812-66

ACC NR: AT6008647

6

from card 2/3

31 - ZG-12 master oscillator; 32 - amplifier; 33 - EO-7 oscilloscope; 34 - single-pole switch; 35 - scaler; 36 - 528 heterodyne wavemeter; 37 - pre-evacuation pump; 38 - vacuum cock; 39 - vacuum slide valve; 40 - diffusion pump; 41 - peak-current relay; 42 - ammeter; 43 - autotransformer; 45 - two-pole switch; 46 - fuses; 47 - pilot lamp; 48 - resistor; 49 - contacter; 50 - ROT-25/10 variator.

Orig. art. has: 3 diagrams.

SUB CODE:14, 11/SUBM DATE: 19Aug65

Card 3/3 PB

L 42120-66 EWT(e)/EWT(m)/EWP(w)/EWT(v)/EWT(j)/T/EWT(t)/ETI/EWP(k) IJP(c) JD/HW/WW/

ACC NR: AP6021618 SOURCE CODE: UR/0021/66/000/006/0835/0836

JG/EM/AT/RM/WH

AUTHOR: Kashtalyan, Yu. A.; Kravchuk, L. V. 155 104

ORG: none

TITLE: The fourth symposium on high-temperature static and dynamic strength of materials and structural elements B

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1966, 835-836.

TOPIC TAGS: scientific conference, high temperature material, high temperature strength, high temperature research, metallography, stress analysis, high temperature phenomenon, synthetic material, scientific personnel

ABSTRACT: The fourth symposium on high-temperature static and dynamic strength of materials and structural elements was held on 21-24 March 1965 in Kiev. The Institute of Problems in Material Science, Institute of Mechanics, Institute of Electric Welding, Institute of Engineering Physics (all four of the Ukrainian Academy of Sciences), Institute of Metallurgy im. A. A. Baykov, Central Boiler and Turbine Institute im. I. I. Polzunov, All-Union Heat Engineering Institute im. F. Ye. Dzerzhinskiy, Institute of Silicate Chemistry, and the Leningrad Metal Works were represented.

Academician G. S. Pisarenko (Ukrainian Academy of Sciences), in his opening statement, emphasized the importance of such symposia for the development and coordination of research on high-temperature strength, and reported

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721020010-8"

on investigations conducted at the Institute of Problems in Material Science. Numerous methods and units have been developed for investigating the tensile strength, rupture strength, hardness and elasticity of refractory materials at high temperatures in vacuum, inert environments, and aggressive media. A considerable effort has been made in research on thermal fatigue under simultaneous action of thermal and mechanical stresses, as occurs in turbine blades and disks.

M. G. Lozinskiy (Moscow) spoke on the contemporary status of high-temperature metallography and on methods and equipment which he and his co-workers developed for observation, photography and cinematography of specimens subjected to stresses at temperatures over 3000C.

V. S. Ivanova, Yu. G. Ragozin and M. A. Vorob'yev (Moscow) reported on the energy method they used in the analysis of processes of deformation and fracture and showed that a consideration of fracture energy can lead to the establishment of certain basic relationships for diverse stress conditions.

V. K. Kharchenko (Kiev) discussed the effects of environment, deformation rate, and duration of heating on the high-temperature mechanical properties of tungsten, molybdenum and niobium. It was found that all the above factors have a considerable effect not only under creep conditions, but also in the short-time tests.

G. S. Mulashenko spoke of the strengthening effect of carbide phases in niobium alloys at room and high temperatures. It was shown that carbide phases are effective strengtheners for niobium alloys, especially those intended for high temperature service.

I. S. Mayenskas, A. Ya. Peras (Kaunas) and V. K. Kharchenko, S. S. Gorodetskiy, and V. K. Kozakov (Kiev) discussed the strength characteristics of oxide ceramics and oxygen free compounds. Both types of materials are believed to have numerous advantages over refractory metals and alloys.

Reports of Ye. K. Keler and E. I. Kozlovskaya (Leningrad), and A. F. Biloivan, G. V. Isaklanov, M. G. Lozinskiy, G. E. Vishnevskiy, and M. A. Malakhov dealt with the effect of stress state, temperature, environment, and intensive one-side heating on the physical and mechanical properties of synthetic materials, such as sitall, glass and glass-reinforced plastics.

V. M. Kiselevskiy (Kiev) reported on research on rupture strength of metals under conditions of high stresses and programmed temperature changes. V. I. Danknis, and T. Ya. Prantskavichus (Kaunas) spoke on the thermal shock resistance and erosion resistance of oxide refractories under conditions simulating those which occur in a magnetohydrodynamic generator.

L 07564-67 EWT(m)/EWP(w)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/EM/GD

ACC NR: AT6029368 SOURCE CODE: UR/0000/66/000/000/0149/0157

AUTHOR: Yakovlev, A. P. (Kiev); Kashtalyan, Yu. A. (Kiev); Rzhavin, L. N. (Kiev); Matveyev, V. V. (Kiev)

63
B+1

ORG: none

TITLE: Investigation of the damping properties of some turbine blade materials at high temperatures

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Rasseyaniye energii pri kolebaniyakh uprugikh sistem (Energy dissipation during vibrations of elastic systems). Kiev, Naukova dumka, 1966, 149-157

TOPIC TAGS: vibration damping, turbine blade, alloy steel

ABSTRACT: The article presents the results of an investigation of the damping properties of alloys Kh17N2, DI-1, and DI-5, which are used for fabrication of compressor blades in turbine equipment. The experiments were made with transverse vibrations due to pure bending, under conditions of normal and high temperatures (up to 523°K). The chemical composition of the experimental materials is given in a table. The samples were in the following states: a) the raw material; b) preparation by Technique A (heating with forging up to t = 1423 ± 50°K with cooling in air; subsequent heating with mechanical working up to t = 1123 ± 50°K with cooling in air;

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L 07564-67
ACC NR: AT6029368

and, heating to t = 953°K, holding for not less than 1 hour, and cooling in air; c) preparation by Technique B (heating with forging up to t = 1423 + 50°K with cooling in air, and subsequent heating with mechanical treatment up to t = 953°C, holding for not less than 1 hour, cooling in air). The vibrational and heating systems are shown in a figure and experimental results are shown in a series of curves. General conclusions are: 1) out of the three alloys tested in the temperature range up to 523°K, only alloy DI-5 exhibited a large value of the logarithmic damping decrement, exceeding by 4-5 times the value of the decrement for construction steels; 2) treatment of the samples by Techniques A and B lowers considerably the value of the logarithmic damping decrement; 3) the damping capacity of alloys DI-1 and Kh17N2 is much weaker. The magnitude of the logarithmic decrement for these alloys is practically identical, but in its absolute value is much less than for construction carbon steels; 4) thus, from the point of view of damping properties, alloy DI-5 is preferable. Orig. art. has: 1 formula, 5 figures and 1 table.

SUB CODE: 11, 20/ SUBM DATE: 22Feb66/ ORIG REF: 002
10,21/

Card 2/2 nst

KASHTALYAN, Yu.O. [Kashtalian, IU.O.]; YAKOVIEV, A.P. [IAkovliev, A.P.]

Fifth Scientific and Technological Conference on Problems of the Dispersion of Energy by Vibrations. Dop. AN URSR no.3:392-394 '65. (MIRA 18:3)

KASHTAN, M.S.; SOBOTOVICH, E.V.; KHLOPINA, T.N.

Raising the sensitivity of the isotopic spectral analysis of lead. Opt.i spektr. 8 no.1:23-26 Ja '60. (MIRA 13:7)

(Lead—Spectra)

S/120/61/000/006/032/041
E192/E382

AUTHOR: Kashtan, M.S. and Khlopina, T.N.

TITLE: A hollow cathode discharge tube

PERIODICAL: Pribory i tekhnika eksperimenta, no. 6, 1961, 136 - 137

TEXT: The tube is illustrated diagrammatically in the figure. The upper portion 1 of the tube (which can be fixed to some equipment) is provided with a flat parallel window 2 which is hermetically sealed. Condensation on the window due to cooling of the hollow cathode by liquid nitrogen is prevented by furnishing the upper portion 1 with ribs made of stainless steel having a low thermal conductivity. The vacuum-tight demountable joint 3 with the gasket 4 makes it possible to join the tube to a vacuum system and a system for admitting the required gas. The middle portion 6 of the cathode is in the form of a thin-walled (0.5 - 0.7 mm) cylinder of stainless steel (type 1X 18H 9 (1Kh18N9)). The lower portion 8 is made of red copper. The two portions are joined by a vacuum-tight silver weld 7. The high thermal conductivity of the copper permits

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S/120/61/000/006/032/041
E192/E382

A hollow cathode discharge tube

effective cooling of the cathode. The tube is used as a source of light for spectroscopic investigations of hyperfine and isotopic structure of spectral lines and the sample to be analyzed is placed in the hollow cathode in a metal cup 9 , which forms a good electric contact when the cathode is cooled by liquid nitrogen. The cup is provided with a metal insert 10 and is terminated (on top) with a flange joint 5 . After inserting the sample, the cathode is fixed to the upper portion of the tube by means of 3 screws 4 . The level of immersing the cathode portion of the tube into the liquid nitrogen is indicated by the line AA' . The positive potential to the anode of the tube is applied through a vacuum-tight electrical terminal, fixed on a sealing insulator 15 . The anode 11 is made of steel and is attached to the wire ring 12 . The negative potential is applied to the upper portion of the discharge tube. In order to obtain the discharge in the hollow cathode and prevent its appearance in the undesirable regions of the tube, the electrodes are insulated by components 13, 14 and 16, made of a special material (ftoroplast-4). The device can easily be attached to a

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S/051/61/010/004/003/007
E032/E314

AUTHORS: Kashtan, M.S. and Khlopina, T.N.

TITLE: Increasing the Accuracy of Isotopic Spectral Analysis

PERIODICAL: Optika i spektroskopiya, 1961, Vol. 10, No. 4, pp. 518 - 523

TEXT: The aim of the present work was to investigate the possibility of increasing the accuracy and the concentrational sensitivity of isotopic spectral analysis. The principle of the method employed can be summarised as follows. Suppose that the hyperfine structure under investigation consists of n components and their intensities I_k ($k = 1, 2, \ldots, n$) are to be determined. A further unknown quantity is the intensity $i_\Phi(\lambda)$ of the continuous background which is present in the recorded spectrum. The dependence of this background on wavelength is assumed to be unknown and is written down in the form

$$i_\Phi(\lambda) = \beta(\lambda) I_\Phi \qquad (1)$$

Increasing the Accuracy ....

where I_D is the maximum intensity of the background in the region under investigation. It is clear that $\beta(\lambda) = 1$ when the background can be looked upon as constant within the working range. Although the determination of the intensity of the background is not of practical interest, the quantity I_Φ must be introduced in order to obtain a complete set of equations. As a result, there are $n + 1$ unknowns and they can be determined from the following set of equations

$$\left.\begin{aligned} &a_{11}I_1 + a_{12}I_2 + \ldots + a_{1n}I_n + \beta_1 I_\Phi = A_1, \\ &a_{21}I_1 + a_{22}I_2 + \ldots + a_{2n}I_n + \beta_2 I_\Phi = A_2, \\ &\ldots\ldots\ldots\ldots\ldots\ldots \\ &\ldots\ldots\ldots\ldots\ldots\ldots \\ &a_{n+1,1}I_1 + a_{n+1,2}I_2 + \ldots + a_{n+1,n}I_n + \beta_{n+1} I_\Phi = A \end{aligned}\right\} \quad (2) .$$

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Eq.(2) on page 519 attached to Mat 8.

Increasing the Accuracy ....

Eq. (2) can be solved to give

$$I_k = f_k(\alpha_{\ell k}, \beta_\ell, A_\ell), \quad I_{\underline{k}} = f_k(\alpha_{\ell k}, \beta_\ell, A_\ell) \qquad (3)$$

and hence it is clear that the accuracy with which the intensities I_k can be determined depends on the accuracy with which the constants α, β and A are measured. The transition from the intensities of the hyperfine-structure components to the concentration C_i of any of the m isotopes of an element under investigation can be carried out with the aid of the formula:

$$C_i = \frac{I_i}{\sum_{t=1}^{m} I_t} \cdot 100\ (\%) \qquad (4)$$

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Increasing the Accuracy ....

This method of analysing the recorded spectra was used by the present authors to determine the isotopic composition of micro-quantities of lead (of the order of 5×10^{-5} g). The experimental work was carried out with a photo-electric spectrometer incorporating a Fabry-Perot interferometer as the high-resolution element. The analytical line was the line PbI 4057.8 Å. The hyperfine structure of this line consists of six components corresponding to the 4 lead isotopes Pb^{204}, Pb^{206}, Pb^{207} and Pb^{208} (Fig. 1a). Of these, three components (207a, 207b and 207c, with relative intensities equal to 9, 5 and 1) belong to the even-odd isotope Pb^{207}. The distance between the plates of the Fabry-Perot etalon was 10.00 ± 0.01 mm. With this separation there is no overlap between the hyperfine-structure components belonging to neighbouring orders (Fig. 1b). The reflection coefficient of the mirrors was 88% and this ensured that the real maxima of the components 204, 206, 207b and 207c could be assumed to coincide with the recorded maxima. In

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this way, the intensities corresponding to the maxima could be used as the experimental quantities A_{204}, A_{206}, A_{207b} and A_{207c} in Eq. (1). Since the components 208 and 207a were not resolved (the distance between them was 0.0108 cm^{-1}), the last of the experimental quantities A_{208} was determined at the point corresponding to the position of the 208 component. The hyperfine-structure data for the PbI 4057 Å, shown in Fig. 1a, were taken from the paper by A. Steudel (Ref. 6). The excitation of the analytical line in the discharge tube was such that there was practically no self-absorption of the strong components. For this reason, the form of the instrumental profile was determined only by the "contrast" of the interferometer and the Doppler broadening in the source. The accuracy of the above method of determination of the isotope composition of micro-quantities of lead was found to approach the accuracy attainable with mass spectrometric analysis. This is shown in Table 3.

Increasing the Accuracy S/051/61/010/004/003/007
E032/E314

There are 2 figures, 3 tables and 7 references: 5 Soviet and 2 non-Soviet.

SUBMITTED: May 23, 1960

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Table 3:

Method of investigation	Isotope concentration, %			
	Pb^{208}	Pb^{206}	Pb^{207}	Pb^{204}
Spectral analysis	52.48	25.25	20.86	1.40
	51.88	25.62	21.12	1.37
	51.62	25.51	21.50	1.36
Mass spectrometric analysis	52.18	25.20	21.25	1.37
	52.06	25.24	21.33	1.37

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S/051/61/010/004/003/007
E032/E314

Fig. 1: Hyperfine Structure of the PbI 4057.8 Å Line
a - true distribution; б - distribution observed with a Fabry-Perot etalon with a separation of 1 cm.

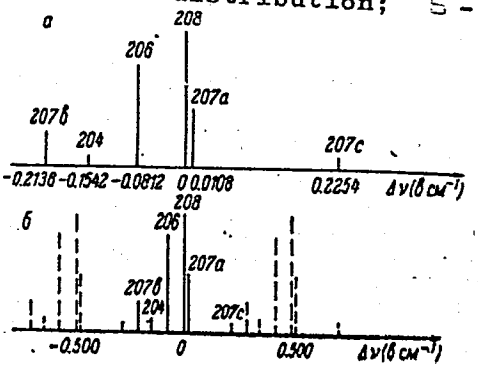

Рис. 1. Сверхтонкая структура линии PbI 4057.8 Å.
а — истинное распределение, б — картина, наблюдаемая с эталоном Фабри—Перо толщиной 10 мм.

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S/120/63/000/001/067/072
E194/E455

AUTHOR: Kashtan, M.S.

TITLE: An improved construction of discharge tube with hollow cathode

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1963, 202

TEXT: A previous article (PTE, no.6, 1961, 136) proposed to use insulating parts of fluoroplast (p.t.f.e.) in a metal discharge tube, to facilitate experimental work and improve the tube properties. An improved construction of the discharge tube is now offered which better illustrates the potentialities. Its special features are described, to clarify the accompanying drawing. The replaceable anode 11 sits in the annular spring of the electrical connection 12 which screws into the terminal 17. All three parts are of acid resistant stainless steel; they are carefully polished and so are the internal surfaces of parts 1, 6, 8 and 10. The p.t.f.e. part 16 has six lugs 5 mm long and of section 2 x 4 mm to center it within the body 9. There are three lugs in each of two horizontal planes. The cylindrical end of the insulator 15 fits a hole in the part 16, thus fixing it in the working position pressed against the window 2. The end of the

Card 1/3

second replaceable p.t.f.e. part 14 is firmly inserted into a bore on its lower end. Like part 16, the p.t.f.e. insert 13 is centered by six lugs, but they are 1.5 mm long of section 1.5 x 2 mm and permit the insert to slide easily into the cathode body, part 6. The new shapes and methods of fixing of parts 12, 14 and 16 facilitate assembly of the discharge tube and avoid the former dependence on electrical insulation of the current lead to the anode and of the inner wall of the vacuum connection. There is 1 figure.

SUBMITTED: March 10, 1962

Card 2/3

S/120/63/000/001/067/072
E194/E455

An improved construction ...

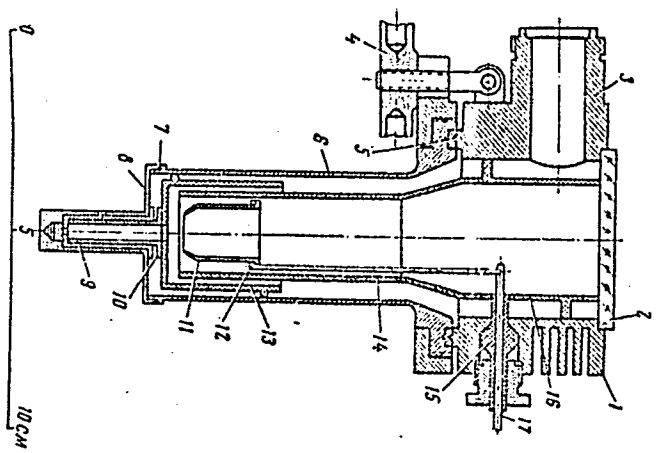

Fig.

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KASHTAN, M.S.; KHLOPINA, T.N.

Pressure chamber for a Fabry - Perot interferometer. Prib. i tekh. eksp. 9 no.2:148-149 Mr-Ap'64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut razvedochnoy geofiziki.

KASHTAN, N.S.; KHLOPINA, T.E.; SOBOTOVICH, E.V.; LOVTSIUS, A.V.

Comparison of the results of the spectral and mass spectrometric determination of the isotope composition of lead microquantities. Metod. opr. abs. vozr. geol. obr. no.6:67-71 '64 (MIRA 18:2)

KASHTAN, Saveliy Mikhaylovich, kand. tekhn. nauk, dots.;
GUROVA, N., red.

[Kinematics of flat hinged and cam mechanisms; a textbook]
Kinematika ploskikh sharnirnykh i kulachkovykh mekhanizmov; uchebnoe posobie. Leningrad, Severo-Zapadnyi zaochnyi politekhn. in-t. No.1. 1963. 69 p. (MIRA 18:3)

SAMOYLOV, Andrey Grigor'yevich; KASHTANOV, Andrey Ivanovich; VOLKOV, Vasiliy Semenovich; PANASENKOVA, Ye.I., red.

[Dispersive fuel elements of nuclear reactors] Dispersionnye teplovydeliaiushchie elementy iadernykh reaktorov. Moskva, Atomizdat, 1965. 342 p. (MIRA 19:1)

L 25666-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWP(t) ES/WW
ACC NR: AM6012204 Monograph UR/ 34/ 84/

Samoylov, Andrey Grigor'yevich; Kashtanov, Andrey Ivanovich; Volkov, Vasiliy Semenovich

Nuclear reactor dispersion fuel elements (Dispersionnyye teplovydelyayushchiye elementy yadernykh reaktorov) Moscow, Atomizdat, 1965. 342 p. illus., biblio. 1650 copies printed.

TOPIC TAGS: nuclear reactor, reactor fuel element, dispersion fuel element

PURPOSE AND COVERAGE: The book is intended for physicists and reactor engineers specializing in the design of reactor fuel elements. It can also be useful for students of higher technical schools. The design of dispersion fuel elements for nuclear reactors is reviewed in detail and extensive references cited. The authors express their gratitude to Andrey Anatoliyevich Bochvar, member of the Academy of Sciences USSR, for his advice.

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3. Production of dispersion-type fuel elements -- 103

4. Mechanical and physical properties of dispersion compounds - 204

5. Radiation resistance of dispersion fuel elements -- 223

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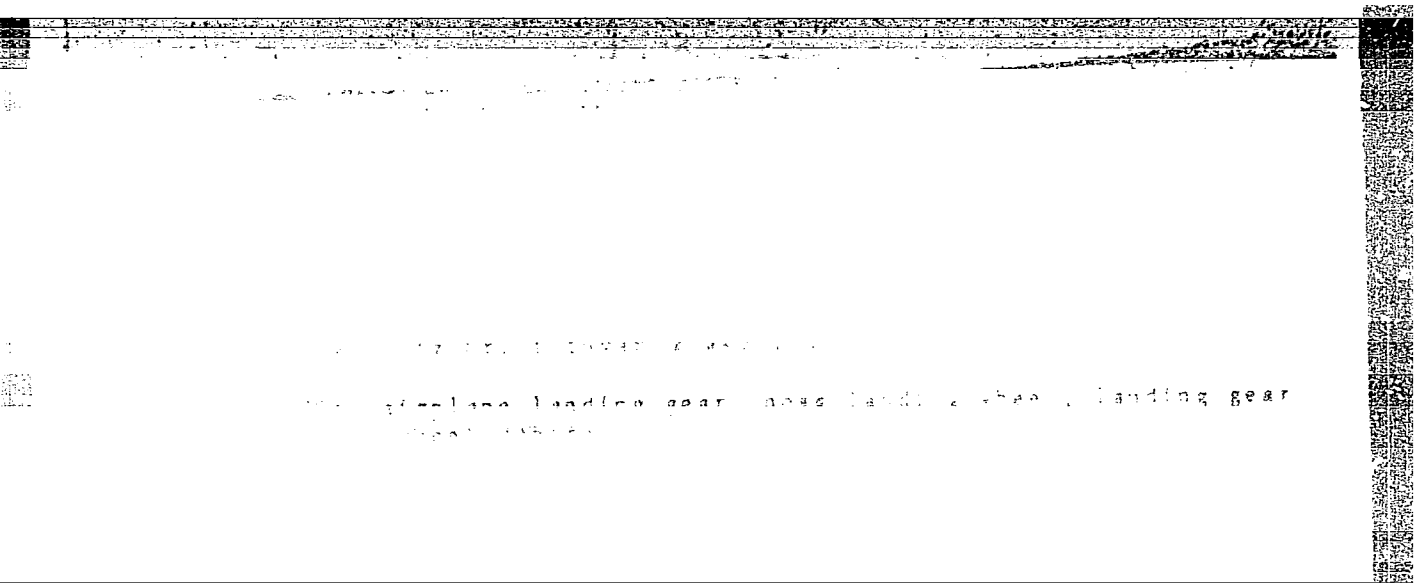
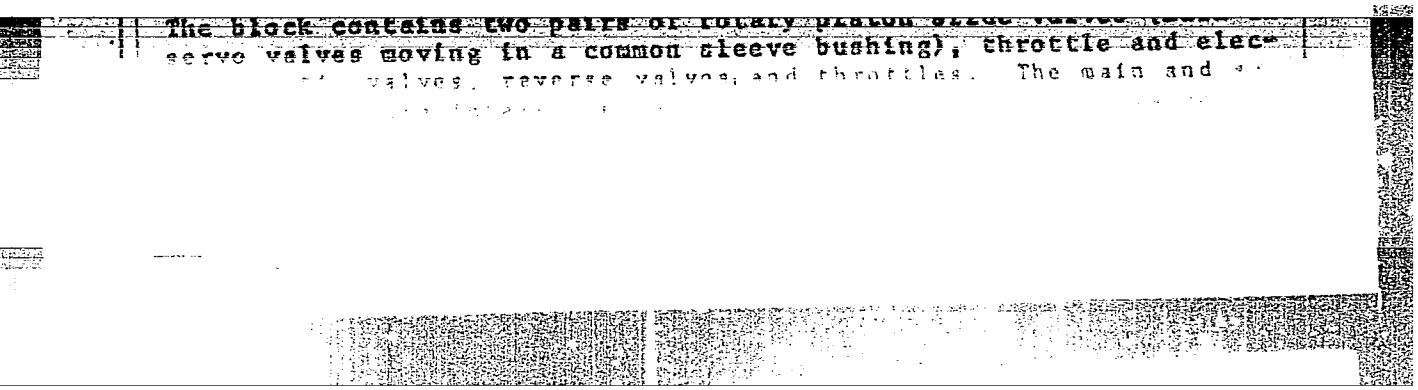
SUB CODE: 18/ SUBM DATE: 150ct65/ ORIG REF: 013/ OTH REF: 142

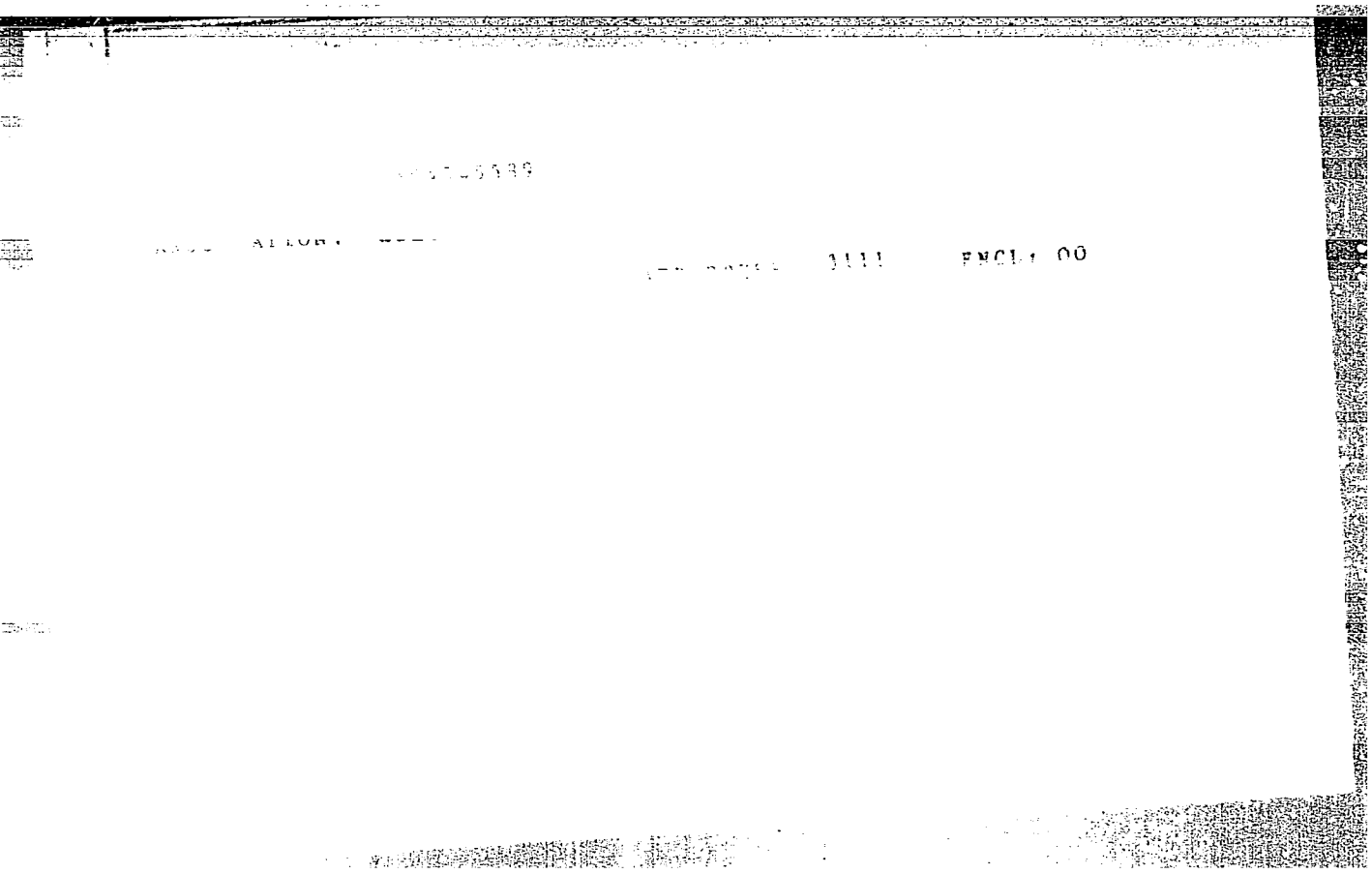
Card 2/2 dda

KASHTANOV, A.N., agronom

Soil cultivation in Omsk Province. Zemledelie 27 no.9:30-33 S '65. (MIRA 18:10)







CHAYKA Vladimir Antonovich, kand. tekhn. nauk; ANTONIK, Mikhail Terent'yevich, elektrosvarshchik; KASHTANOV, F., red.

[Highly efficient build-up welding with a manually operated arc] Vysokoproizvoditel'naia ruchnaia dugovaia naplavka. Minsk, Gosizdat BSSR, 1963. 18 p. (MIRA 18:2)

LEBEDEV, S.M.; IVANOV, V.B.; KASHTANOV, F., red.; STEPANOVA, N., tekhn.red.

[People's housing construction projects] Opyt zhilishchnogo stroitel'stva metodom narodnoi stroiki (gor.Gomel'). Minsk, Gos.izd-vo BSSR, 1958. 50 p. (MIRA 13:1)
(Gomel'--Building)

CHAYKA, V.A.; KASHTANOV, F., red.; STEPANOVA, N., tekhn.red.

[Principles of resistance welding and electric heating] Osnovy kontaktnoi svarki i elektronagreva. Minsk, Gos.izd-vo BSSR, Red. nauchno-tekhn.lit-ry, 1958. 76 p. (MIRA 12:5)
(Electric welding)

KASHTANOV F.

PHASE I BOOK EXPLOITATION 1157

Dmitrovich, A.M.

Tekhnologiya metallizatsii raspyleniyem (Technology of Metal Spraying) Minsk, Gosizdat, BSSR, 1958. 195 p. (Series: Biblioteчka rabochego mashinostroitelya) 3,000 copies printed.
Ed.: Kashtanov, F.; Tech. Ed.: Slavyanin, I.

PURPOSE: The book is intended to acquaint readers with the types, purposes, and methods of metal spraying and with various related data.

COVERAGE: The book deals with the basic principles of the spraying process, the properties of sprayed-metal coatings, spraying equipment, planning the spraying department, spraying methods, further finishing of sprayed surfaces, and safety techniques. No personalities are mentioned. There are 35 references, all Soviet.

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[Suggestions for greater efficiency made by White Russian builders] Ratsionalizatorskie predlozheniia stroitelei Belorussii. Minsk, Gos.izd-vo BSSR, 1959. 142 p. (MIRA 13:4)

1. White Russia. Ministerstvo stroitel'stva. 2. Zamestitel' ministra stroitel'stva BSSR (for Baturin).
(Building--Technological innovations)

GORANSKIY, G.K.; KASHTANOV, F., red.; STEPANOVA, N., tekhn.red.

[High-duty cutting tools; cutting tools for machining holes] Vysokoproizvoditel'nyi instrument; instrument dlia obrabotki otverstii. Minsk, Gos.izd-vo BSSR, Red.nauchno-tekhn.lit-ry, 1959. 258 p. (MIRA 12:9)
(Metal-cutting tools)

DOSYULEV, S.G.; SOLONSKIY, A.S.; SMIRNOV, M.V.; KASHTANOV, F., red.; STEPANA, N., tekhn.red.

[Reference handbook for machine designers] Spravochnoe posobie konstruktoru - mashinostroiteliu. Minsk, Gos.izd-vo BSSR. Red.nauchno-tekhn.lit-ry, 1959. 258 p. (MIRA 12:10)
(Machinery--Design)

GRIGOR'YEV, Sergey Sergeyevich; inzh.; LEBEDEV, Anatoliy Maksimovich, inzh. Prinimal uchastiye GORANSKIY, G.K., kand.tekhn.nauk. KASHTANOV, F., red.; STEPANOVA, N., tekhn.red.

[Automatic adjustment and readjustment of machine tools and cutting tools in automatic production lines and automatic machines] Avtomaticheskaia naladka i podnaladka stankov i instrumentov v avtomaticheskikh liniiakh i stankakh-avtomatakh. Minsk, Gos.izd-vo BSSR. Red.nauchno-tekhn.lit-ry, 1960. 178 p. (MIRA 13:10)
(Machinery, Automatic--Maintenance and repair)

KOSTYUKOVICH, F.T.; KASHTANOV, F., red.; KARPINOVICH, Ya., tekhn.red.

[Problems in forestry economics and planning] Voprosy ekonomiki i planirovaniia lesokhoziaistvennogo proizvodstva. Minsk, Gos.izd-vo BSSR. Red.nauchno-tekhn.lit-ry, 1960. 204 p. (MIRA 14:2)
(Forests and forestry--Economic aspects)

DMITROVICH, Anatoliy Mikhaylovich; KASHTANOV, F., red.; STEPANOVA, N., tekhn.red.

[Fundamentals of machine-shop practices] Osnovy slesarnoi obrabotki metallov; vtoroe dopolnennoe izdanie. Minsk, Gos.izd-vo BSSR. Red.nauchno-tekhn.lit-ry, 1960. 221 p.
(MIRA 13:12)

(Machine-shop practice)